

A/ 1. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

- a) a cartridge access device;
- b) at least two laterally adjacent modular units, each of said modular units comprising:
  - i) a plurality of cartridge receiving devices;
  - ii) a first elongate gear rack having first and second ends and aligned along a displacement path;
  - iii) a first elongate guide member integral with said first elongate gear rack and extending along the displacement path substantially between the first and second ends of said first elongate gear rack;
  - iv) a first bearing mounted to the cartridge access device, said first bearing engaging said first elongate guide member;
  - v) a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack; and
  - vi) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;
- c) a translation apparatus for moving a cartridge

access device along a displacement path, comprising:

- i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;
- ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and
- iii) a pinion drive apparatus operatively associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units.

A2 3. (Amended) The modular data storage system of claim 1, wherein said first elongate guide member comprises first and second opposed bearing surfaces and wherein said first bearing mounted to the cartridge access device slidably engages the first and second opposed bearing surfaces of said first elongate guide member.

A3 8. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

- a) a cartridge access device;
- b) at least two laterally adjacent modular units, each of said modular units comprising:
  - i) a plurality of cartridge receiving devices;
  - ii) a first elongate gear rack aligned along a displacement path;

iii) a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack;

iv) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

v) a third elongate gear rack positioned in generally parallel, spaced-apart relation to said first elongate gear rack;

vi) a fourth elongate gear rack positioned in generally parallel, spaced-apart relation to said second elongate gear rack so that said first, second, third, and fourth elongate gear racks define a generally rectangular, parallelopiped configuration with said first and third elongate gear racks defining a bottom side of the generally rectangular, parallelopiped configuration and said second and fourth elongate gear racks defining a top side of the generally rectangular, parallelopiped configuration; and

vii) wherein the third elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the fourth elongate gear racks of said laterally adjacent modular units are substantially in

AB

alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

- AB
- i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;
  - ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and
  - iii) a pinion drive apparatus operatively associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units.

11. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

- AC
- a) a cartridge access device;
  - b) a master modular unit and at least one slave modular unit, each of said modular units being positioned adjacent one another to form laterally adjacent modular units, each of said modular units comprising:

- i) a plurality of cartridge receiving devices;
- ii) a first elongate gear rack having first and second ends and aligned along a displacement

path;

iii) a first elongate guide member integral with said first elongate gear rack and extending along the displacement path substantially between the first and second ends of said first elongate gear rack;

iv) a first bearing mounted to the cartridge access device, said first bearing engaging said first elongate guide member;

v) a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack; and

vi) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;

ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and

iii) a pinion drive apparatus operatively

X4

associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units;

- d) said master modular unit further comprising a power supply.
- 

X5

15. (Amended) The modular data storage system of claim 11, wherein said first elongate guide member comprises first and second opposed bearing surfaces and wherein said first bearing mounted to the cartridge access device slidably engages the first and second opposed bearing surfaces of said first elongate guide member

---

X6

23. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

- a) a cartridge access device;
- b) at least two laterally adjacent modular units, each of said modular units comprising:
  - i) a plurality of cartridge receiving devices; and
  - ii) an elongate gear rack aligned along a displacement path;
- c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:
  - i) guide means integral with said elongate gear rack for guiding the cartridge access device

along said displacement path;

ii) a drive pinion mounted to the cartridge access device, said drive pinion engaging said elongate gear rack; and

iii) pinion drive means operatively associated with said drive pinion for rotating said first drive pinion to move the cartridge access device along the displacement path;

d) wherein said elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another such that said cartridge access device may be translated among said laterally adjacent modular units.

---

#### REMARKS

Claims 2 and 14 are cancelled. Claims 1, 3, 8, 11, 15, and 23 are amended. Claims 1, 3-13, and 15-23 remain for consideration. Re-examination and reconsideration are requested.

In the Office Action, the examiner rejected claims 2-7, and 14 under 35 U.S.C. § 112 as being indefinite, as discussed in paragraph 2 of the Office Action. The examiner also advised the applicants that should claims 2 and 14 be found allowable, these claims would be objected to under 37 C.F.R. § 1.75, as discussed in paragraph 4 of the Office Action. The Applicants note that the advisory is now moot in view of the amendments and cancellations to the claims. With regard to substantive rejections, the examiner rejected claims 1-7, 10-19, and 22-23 under 35 U.S.C. § 102(e) as being anticipated by Tadokoro, et al. (U.S. Patent No. 6,166,877 (Tadokoro))